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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,539	12/05/2003	Jason Charles Pelly	282557US8X	8289

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EXAMINER	
HOANG, DANIEL L	
ART UNIT	**PAPER NUMBER**
2436	

NOTIFICATION DATE	DELIVERY MODE
09/16/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/728,539	PELLY ET AL.	
	Examiner	Art Unit	
	DANIEL L. HOANG	2436	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-15,17,18,21,22,24 and 26-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 7-14,17,18,21,22 and 24* is/are rejected.

7)☒ Claim(s) *5, 15, 26-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

RESPONSE TO ARGUMENTS

Applicant's arguments, see Arguments/Remarks, filed 6/26/09, with respect to the rejection(s) of claim(s) 1, 11, 17, and 21 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Muratani, US PGP No. 20060023913

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7, 10-14, 17-18, 21-22, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Muratani, US Patent No. 20060023913.

As per claim 1, 11, 17, 21-24, Muratani teaches:

A data processing apparatus operable to identify a code word present in a marked version of a material item, the material item composed of a plurality of units and the code word composed of a plurality of parts, each part including different data from the code word, the marked version formed by combining each of the plurality of parts of the code word with one of the plurality of units, the apparatus comprising:

a recovery processor operable to recover a partial code word composed by at least one of the plurality of parts of the code word from at least one of the plurality of corresponding units of the marked material item, and

[see paragraph 94, wherein the assumed sequence seed is deemed analogous to the claimed "partial code word composed by at least one of a plurality of parts of the code word"

[the content embedded with the watermark is viewed as the claimed "marked material item"]

[the assumed sequence seed is generated from the division of the detection objective content and each of the shifted contents into blocks]

a correlator operable to generate for the marked material item a dependent correlation value by correlating the partial code word a corresponding partial stored code word that is part of a whole stored code word, and

[see paragraph 94, wherein a correlation value of the original content as well as objective content is generated]

a detector operable to determine whether the whole stored code word is present in the marked material item based on the dependent correlation value for the partial code word exceeding a predetermined threshold, wherein

[see paragraph 94, the correlation value is compared against a preset reference value]

when the dependent correlation value does not exceed the predetermined threshold the correlator is operable to iteratively increase a number of parts of the code word used to, to increase information quantity of the recovered partial code word,

[see paragraph 96, wherein the processing is repeated until it is determined that the sequence of the numbers is superimposed on the objective content]

each time the information quantity of the partial code word is increased, the correlator is operable to generate a dependent correlation value by correlating the partial code word having increased information quantity with a corresponding partial stored code word, the iterative increasing of the information quantity of the partial code word continuing until the whole code word is recovered by the recovery processor and correlated with the whole stored code word by the correlator or the predetermined threshold exceeded.

[see fig. 12, step s16, wherein if the sequence is not yet found, the process is repeated and a new sequence is added to the already generated sequence(s).

As per claim 2, 12, Muratani teaches:

A data processing apparatus as claimed in claim 1, wherein the detector is operable in combination with the correlator to form a dependent correlation value for a plurality of parts of the recovered code word, and if the correlation value exceeds the predetermined threshold for one of the dependent correlation values, the detector is operable to identify the code word as present according to a predetermined false detection probability.

[see paragraph 96]

As per claim 3, 4, 13, 14, Muratani teaches:

A data processing apparatus as claimed in claim 2, wherein the detector is operable in combination with the correlator to form the dependent correlation values by combining the parts of the code word recovered from successive material units, and by correlating the parts formed from successive material units with corresponding part of the regenerated code word.

[see fig. 12, elements s16 and s13]

As per claim 7, Muratani teaches:

A data processing apparatus as claimed in claim 1, wherein the detector and the correlator are operable in combination to form the dependent correlation value for at least one selected code word re-generated from the set of code words, the code word being selected from the set in accordance with the relative magnitudes of the dependent correlation value formed for each code word of the set.

[see paragraphs 103-105]

As per claim 8, Muratani teaches:

A data processing apparatus as claimed in claim 1, wherein the plurality of code words are formed from a first code word having a plurality of predetermined pseudo-randomly distributed coefficients and by generating other code words of the set by cyclically shifting the first code word, and the correlation value is formed for a plurality of the code words by forming a Fourier transform of the recovered code word, forming a Fourier transform of the first code word of the set, forming the complex conjugate of one of the Fourier transform of the recovered code word and the Fourier transform of the regenerated code word, forming intermediate product samples by multiplying each of the Fourier transform samples of the recovered code word and the corresponding Fourier transform samples of the first code word, forming correlation samples by forming an inverse transform of the intermediate product samples, each of the correlation value samples providing the correlation value for one of the set of code words, wherein the forming a Fourier transform of the part of the recovered code word comprises setting the remaining part of the recovered code word to zero, and forming the Fourier transform of the recovered code word, and the forming a Fourier transform of the first code word of the set comprises setting the remaining part of the first code word to zero, and forming the Fourier transform of the first code word.

[see paragraph 148]

As per claim 9, Muratani teaches:

A data processing apparatus as claimed in claim 1, wherein the code word has been introduced into the material item in the discrete cosine transform domain, the apparatus comprising a discrete cosine transform processor operable to transform the marked material item and the original material item into the discrete cosine transform domain, wherein the recovery processor is operable to generate the recovered code word by subtracting corresponding discrete cosine transform coefficients of the original material version from discrete cosine transform coefficients of the marked material version.

[see col. 8, lines 49-67]

As per claim 10, Muratani teaches:

A data processing apparatus as claimed in claim 1, wherein the material is video material, the material units being video images.

[see paragraph 5]

As per claim 18, Muratani teaches:

An encoding data processing apparatus as claimed in claim 17, wherein the plurality of code words are formed from a first code word having a plurality of predetermined pseudo-randomly distributed coefficients and by generating other code words of the set by cyclically shifting the first code word.

[see paragraph 60]

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muratani as applied to claim 1 above, and further in view of Shimizu, US Patent No. 6971012..

As per claims 8 and 9:

The Muratani reference has been discussed above. Muratani is mute in teaching that the code words are formed by forming a Fourier transform or a discrete cosine transform of the recovered partial code word or the code word set. The Shimizu reference is relied upon to teach transformations using a Fourier transform or a discrete cosine transform (see col. 8, lines 49-67).. While Muratani teaches a transformation to the code words, he does not explicitly cite the type of transform. Examiners views

based on applicants specification that the type of transform used is merely a matter of design choice and that it would have been obvious to one of ordinary skill in the art to modify the Muratani reference in order to make use of a Fourier transform or a Discrete cosine transform.

Allowable Subject Matter

Claims 5, 15, and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

POINTS OF CONTACT

*. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

*. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Hoang whose telephone number is 571-270-1019. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Daniel L. Hoang/
Examiner, Art Unit 2436

/Nasser G Moazzami/
Supervisory Patent Examiner, Art Unit 2436